REMARKS

In view of the above amendments and the following remarks, reconsideration of the objections and rejections contained in the Office Action of April 10, 2003 is respectfully requested.

As an initial matter, the Examiner has acknowledged the Applicant's claim for foreign priority based on the three Austrian applications listed in the Declaration. However, the Examiner has asserted that a certified copy of the Austrian applications has not been filed. Consequently, the Examiner's attention is directed to the attached Form PCT/IB/304, indicating that certified copies of the priority documents have been submitted to the International Bureau. Therefore, in accordance with MPEP 1893.03(c), it is respectfully submitted that the Applicant's claim for foreign priority has been perfected.

The Examiner has objected to the drawings because not every feature recited in the claims has been shown in the drawings. In view of this objection, and in order to make additional editorial corrections to the drawings, the Examiner's attention is directed to the corrected formal drawings submitted herewith.

In particular, new Figures 29A, 29B, and 30 have been submitted, and these Figures show a rotary damping component and a linear damping component so as to address the Examiner's objections to the drawings. In addition, Figures 1 and 4 have been amended in order to be identified as Fig. 1A and Fig. 1B, and as Fig. 4A and Fig. 4B, respectively, in addition to removing an improper connecting line. Because the subject matter shown in new Figures 29A, 29B and 30 is clearly supported by the original specification, and because the amendments to Figures 1 and 4 are only editorial corrections, it is submitted that no new matter has been added by any of these drawing amendments, and the Examiner is respectfully requested to enter the drawing amendments. As a result, it is submitted that the Examiner's objection to the drawings has been overcome.

The Examiner has objected to the specification and, specifically, the abstract, due to minor informalities. In this regard, the Examiner has indicated that because the original

application did not contain an abstract, the abstract from the front sheet of the published International Application has been used (although that abstract is not in proper form). However, the Examiner's attention is directed to the new abstract submitted herewith, and the Examiner is requested to enter and consider this new abstract. In addition, the entire specification and abstract have been reviewed and revised in order to make necessary editorial corrections, including inserting the required headings, making minor grammatical corrections, and replacing any non-idiomatic language. No new matter has been added by any of these changes. Due to the number of changes, it was also necessary to prepare and submit a substitute specification, and the Examiner is requested to enter and consider the substitute specification. In view of the submission of the new abstract and the substitute specification, it is submitted that the Examiner's objections to the specification and abstract have been overcome.

The Examiner has rejected claims 1-17 under 35 USC § 112, second paragraph, as being indefinite. In this regard, the Examiner has cited several examples of vague and indefinite language, and has also cited several examples of phrases that lack the necessary antecedent basis. In view of these rejections, and in order to place the original claims in a preferred form, original claims 1-17 have now been cancelled and replaced with new claims 18-37, as indicated above. All of these new claims have been carefully drafted so as to fully comply with all the requirements of 35 USC § 112, and so as to address the matters raised by the Examiner. Therefore, it is respectfully submitted that the Examiner's rejections under § 112 are not applicable to the new claims.

The Examiner has rejected claims 1, 4, 7-11 and 13-17 as being anticipated by the Röck '726 reference (USP 4,445,726); has rejected claims 1, 4, 7, 9, and 11-17 as being anticipated by the Wolters reference (USP 1,902,795); and has rejected claims 1, 4-5, 13, and 15-17 as being anticipated by the Grass reference (DE 3,942,974). In addition, the Examiner has also rejected claims 2 and 3 as being unpatentable over the Röck '726 reference in view of the Migliori reference (EP 556,613); and has rejected claim 6 as being

unpatentable over the Grass reference. However, as indicated above, original claims 1-17 have been cancelled and replaced with new claims 18-37. For the reasons discussed below, it is respectfully submitted that the new claims are clearly patentable over the prior art of record.

New independent claim 18 is directed to a pull-out guide fitting for a drawer, comprising a drawer track to be attached to a drawer, a support track to be attached to a body sidewall, and a center track arranged between the drawer track and the support track. Rolling elements are arranged between the drawer track and the center track, and between the center track and the support track, in order to allow a transfer of the drawer between an open position and a closed position. A *damping device is operable to dampen a relative motion between at least two of the drawer track, the support track, and the center track,* and the damping device includes at least two components operable to move relative to each other. Due to the damping device, the pull-out guide fitting of the present invention allows a drawer to be pulled or pushed in a quiet and smooth manner without any jarring when the drawer is closed.

The Röck '726 reference, the Wolters reference, and the Grass reference are each directed to pull-out guide assemblies, including a drawer track, a support track, and center track between the drawer track and the support track. The Examiner asserts that each of these references also discloses a damping device as in the present invention. However, contrary to the Examiner's position, it is submitted that none of these references disclose or suggest a damping device operable to dampen a relative motion between at least two of said drawer track, said support track, and said center track, as recited in new independent claim 18.

In particular, the Röck '726 reference discloses a pinion 9 that is rotatably mounted in the center of a center rail 2 so as to engage racks 13, 13 (see column 4, lines 28-31). However, the pinion 9 is provided only for support purposes, and the Röck '726 reference does not disclose or even suggest a *damping device* as recited in new independent claim 18.

The drawer suspension of the Walters reference includes a pinion 41 that engages racks 19 and 38. However, as with the Röck '726 reference, the pinion 41 only provides support for the drawer, and the Walters reference does not disclose or suggest a *damping device* as recited in new independent claim 18. Finally, the guide rail of the Grass reference includes a gear wheel 23 which engages a rack 25. Again, however, the gear wheel 23 is provided only for support, and the Grass reference does not disclose or suggest a *damping device* as recited in new independent claim 18.

The Migliori reference discloses a rack and pinion pneumatic actuator with a counter-pressure control and damping device for controlling damping actions. However, the Migliori reference does not teach or even suggest the arrangement of a damping device as recited in new independent claim 18. Specifically, the Migliori reference does not disclose or suggest a damping device that is operable to dampen a relative motion between at least two of a drawer track, a support track and a center track of a pull-out guide fitting for a drawer. In fact, there is not even a suggestion in the Migliori reference to arrange the rack and pinion pneumatic actuator of the Migliori reference so that it corresponds to the damping device of new claim 18, and the Röck '726 reference, the Wolters reference, and the Grass reference also do not provide motivation to arrange a damping device as recited in new independent claim 18, as explained above. Therefore, there is absolutely no motivation for one of ordinary skill in the art to modify the Röck '726 reference, the Wolters reference or the Grass reference in view of the Migliori reference so as to obtain the present invention. Accordingly, it is respectfully submitted that new independent claim 18 and the claims that depend therefrom are clearly patentable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

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August 11, 2003

PULL-OUT GUIDE FITTINGS FOR DRAWERS

Background of the Invention

0001. The invention relates to pull-out guide fittings for drawers or the ~~like with~~ like, including a drawer-side drawer track, a body-side support track and a center track running between these two tracks on both sides of the ~~drawer, wherein the~~ drawer. The weight of the drawer between the tracks is transferred via rollers or the like. In particular, the invention addresses the problem of improving the above-described pull-out guide fittings so that when sliding in or fully pulling out the drawer, jarring is avoided or largely reduced.

~~The invention addresses the problem of improving pull-out guide fittings of the above described type to the extent that when sliding in or fully pulling out the drawer, jarring is avoided or largely reduced.~~

Summary of the Invention

0002. The problem according to the invention is solved ~~thereby that~~ by providing a damping device operating between at least two of the ~~tracks a damping device is effective, which~~ tracks. The damping device comprises at least two parts that are movable relative to one another.

0003. The damping device according to the invention can ~~become~~ be effective when the drawer is being slid ~~in, which means~~ in (when the drawer is completely slid into the body of the furniture ~~item,~~ item) as well as also when pulling out the ~~drawer,~~ drawer (when the drawer reaches its maximum pull-out ~~position.~~ position). The damping device is preferably a hydraulic damping device. This can be formed by a cylinder with a piston linearly displaceable in the cylinder, or by a rotary damper.

~~As the damping device is preferably used a hydraulic damping device. This can be formed by a cylinder with a piston linearly displaceable therein as well as also by a rotary damper.~~

0004. In the following, various embodiments ~~examples~~ of the invention will be described in conjunction with the Figures of the attached ~~drawings. Therein depict~~ drawing, in which:

0005. Fig. 1A is a schematic partial front view of pull-out guide fittings according to the invention, and

Fig. 1B is a detail view of a portion of the pull-out guide fittings shown in Fig. 1A;

Fig. 2 is a plan view from below of the pull-out guide fittings with the drawer ~~open,~~ open;

Fig. 3 is a plan view from below of the pull-out guide fittings with the drawer ~~closed,~~ closed;

Fig. 4A is a partial front view of a further embodiment ~~example~~ of the pull-out guide fittings according to the invention,

Fig. 5 is a plan view from below of ~~this~~ the embodiment ~~example~~ of Fig. 4A with the drawer ~~open,~~ open;

Fig. 6 is a plan view from below of ~~this~~ the embodiment ~~example~~ of Fig. 4A with the drawer ~~closed,~~ closed;

Fig. 7 is a front view of a further embodiment example of pull-out guide fittings according to the ~~invention,~~ invention,;

Fig. 8 to 12 are plan views from below of the pull-out guide fittings according to the invention, wherein the drawer is shown in the maximum pull-out ~~position of~~ position, the closed ~~position~~ position, and in three intermediate ~~positions,~~ positions;

Fig. 13is a front view of a further embodiment ~~example~~ of pull-out guide fittings according to the ~~invention,~~ invention;

Fig. 14 to 18 are plan views from below of the pull-out guide fittings according to the

invention, wherein the drawer is shown in the maximum pull-out ~~position of~~ position, the closed ~~position~~ position, and in three intermediate ~~positions;~~ positions;

Fig. 19 is a front view of pull-out guide fittings ~~with~~ having a control ~~by force~~ device between the ~~tracks;~~ tracks;

Fig. 20 a plan view from below of these pull-out guide fittings in the maximum pulled out ~~position;~~ position;

Fig. 21is a plan view from below of these pull-out guide fittings in an intermediate position, position;

Fig. 22 is a plan view from below of these pull-out guide fittings with the drawer ~~closed;~~ closed;

Fig. 23 is a schematic side view of a further embodiment ~~example~~ of pull-out guide fittings according to the invention in the fully pulled out ~~position;~~ position;

Fig. 24 to 27 are side views of ~~this~~ the embodiment ~~example~~ of the pull-out guide fittings of Fig. 23 ~~according to the invention~~ in differing intermediate ~~positions;~~ positions;

Fig. 28 is a side view of ~~this~~ the embodiment ~~example~~ of pull-out guide fittings of Fig. 23 ~~according to the invention~~ in the closed ~~position.~~ position;

Fig. 29A is a sectional detail view of a rotary damper of the preset invention, while Fig.29B is a side view of the rotary damper; and

Fig. 30 is a schematic side view of linear damper of the present invention.

Detailed Description of the Invention

0006. The embodiments ~~examples~~ shown relate to an underfloor mounting of the pull-out guide fittings according to the invention. The pull-out guide fittings can, however, also be ~~disposed~~ arranged next to ~~the~~ a drawer side ~~wall as well as also~~ wall, and can also be integrally arranged in the drawer frame.

0007. The pull-out guide fittings according to the invention ~~comprise~~ include on each side of the drawer ~~1~~ 1, a support track 3 fastened on a body side wall 2, a drawer track 5 fastened ~~on the drawer 1 underneath~~ to the drawer bottom 4, and a center track 6 ~~running~~ arranged between the tracks 3 and 5.

0008. The load between ~~tracks 3, 5, 6~~ track 3 and track 6, and between track 6 and track 5 is transferred in a conventional manner via rolling elements (such as shown in Figures 19A and 29B, the damping device can be a rotary damper component, including a pinion II and a rack 9 rollers and/or ~~sliders.~~ sliders).

0009. In the embodiment ~~example according to~~ shown in Figures 1 to ~~3~~ 3, a damping device 7 is supported on the drawer track ~~5~~ 5, and the support track 3 ~~comprises~~ includes a stop 8 for stopping the damping device ~~7.~~ 7, and the stop extends radially from the track.

0010. When the drawer 1 is closed, a ~~traverse~~ rack 9 of the damping device 7 abuts the stop 8 (see Fig. 3). The ~~traverse~~ rack 9 is provided with a toothed ~~rack~~ profile 10 which meshes with a pinion 11 of a rotary damper component. ~~As soon as~~ when the ~~traverse~~ rack 9 abuts the stop 8, the pinion 11, and thus the rotary damper component, is rotated. In other words, the pinion II is rotated due to the movement of the rack 9 relative to the pinion II that engages rack 9. When the drawer 1 is opened, the rack 9 is brought into its standby position by a compression spring 12, which pushes against the rack 9 (see Fig.2).

~~When the drawer 1 is opened, the traverse 9 is brought into its standby position by a compression spring 12.~~

0011. In the embodiment ~~example according to~~ of Figures 4 to 6, the damping device 7 is again supported on the drawer track 5. Stop ~~8~~ 8, however, is ~~disposed~~ arranged on the

center track 6. The damping device 7 becomes active (i.e., rach 9 moves relative to pinion II, and pinion II rotates) when the center track 6 has reached its most rearward position and ~~traverse~~ rack 9 abuts stop 8.

0012. In the embodiment ~~example according to~~ of Figures 7 to 12, the damping device 7 according to the invention is supported on the support track ~~3~~ 3, and stop 8 is ~~developed on~~ attached to the center track 6. As soon as stop 8 abuts ~~traverse~~ rack 9, the pinion 11 is rotated and the rotary damper component of the damping device 7 becomes active. As in the previous embodiments, compression spring 12 is arranged so that when the drawer 1 is open, the spring 12 presses the rack 9 into a standby position (see Figs. 8 and 9).

~~A compression spring 12 is provided which, with the drawer 1 open, presses the traverse 9 again into standby position.~~

0013. In the embodiment ~~example according to~~ of Figures 13 to 18, the damping device 7 is supported on the center track 6. The damping device 7 is again provided with a rotary damper component, ~~wherein~~ and the pinion 11 of this rotary damper component meshes with two ~~traverses~~ rack 9. In addition, both support track 3 and drawer track 5 are each provided with a stop 8. When closing the drawer 1, both stops 8 act simultaneously upon the damping device 7.

~~Support track 3 as well as also drawer track 5 are provided with a stop 8.~~

~~When closing the drawer 1, both stops 8 act simultaneously onto the rotary damper of the damping device 7.~~

0014. Between tracks 3, 5, ~~6 advantageously a control is provided, which ensures~~ 6, a controlcomponent is advantageously arranged so that tracks 5, 6 are moved ~~like~~ (like a differential ~~pull-out~~ pull-out) relative to track ~~3~~ 3, and are also moved relative to one another. In this embodiment, compression springs 12 are also provided which, when the drawer 1 is open, press the traverse 9 of the damping device 7 again into the standby position.

~~In this embodiment example also compression springs 12 are provided which, with the drawer 1 open, press the traverse 9 of the damping device 7 again into the standby position.~~

0015. As shown in Figures 19 to 22, the control component can ~~be formed by~~ comprise a friction wheel 13. The friction wheel 13 is supported on the center track 6 and runs on webs of the drawer track 5 and the support track 6 3. A cable control ~~could equally well~~ component can

also be provided. The control component for the controlling flow of motion of the track can be applied in all ~~embodiment examples.~~ embodiments. As illustrated in Figure 19, rollers 14 are arranged between tracks 3, 5, 6.

~~In Figure 19 rollers 14 are shown between tracks 3, 5, 6.~~

0016. Although a rotary damper component has been explained above with respect to Figures 19A and 29B, the damping device 7 ~~is developed as~~ can also be a linear damping component including a cylinder 25 with a piston 24 linearly displaceable therein, as shown in Figure 30. ~~As the~~ The damping medium 22 can be ~~employed~~ a fluid, for example an oil, a gas or air.

0017. In the embodiment ~~example according to~~ of Figures 23 to 28, a damping device 7 and a pull-in attachment 15 are ~~disposed~~ positioned at the back end of the support track 3. On the center track 6, a friction wheel 13 (a control component) is supported, which, if appropriate, can also be provided with a toothed rim. At its front end, the center track 6 has a coupling attachment 16, through which the center track 6 can be coupled with the drawer track 5. The coupling attachment 16 comprises a lever connected to the center track 6 so as to be tiltable, and when the lever is in the coupling position it snaps into a hollow 17 of the drawer track 5 (see Figs. 26-28).

~~On the center track 6 again a friction wheel 13 is supported, which, if appropriate, can also be provided with a toothed rim.~~

~~At its front end the center track 6 is provided with a coupling attachment 16, via which the centertrack 6 can be coupled with the drawer track 5.~~

~~The coupling attachment 16 comprises a lever supported so as to be tiltable on the center track 6, which lever in the coupling position snaps into a hollow 17 of the drawer track 5.~~

0018. The drawer track 5 ~~is provided at its front end with~~ has a stop 18 at its front end. At the start of the closing motion, the center track 6 and the drawer track 5 ~~run out differentially~~ move with respect to one another (i.e., move different amounts), ~~since~~ because the friction wheel 13 rests on the friction face 19 and the drawer track 5 is braced (supported) on the friction wheel 13. In other words, as friction wheel 13 rolls on friction face 19 so as to move drawer track 5 and center track 6 inward (toward the closed position) relative to support track 3,

drawer track 5 rolls over friction wheel 13 to move further inward relative to center track 6 (see Figs. 23 and 24).

0019. When the center track 6 and the drawer track 5 have reached the position shown in Figure 24, the friction wheel 13 leaves the friction face 19 and the control action of the friction wheel 13 is discontinued. At this point, the stop 18 of the drawer track 5 abuts the front end of the center track 6 so that the center track 6 is pushed further into the body by the drawer track 5.

~~Instead, the stop 18 of the drawer track 5 abuts the front end of the center track 6 and the center track 6 is pushed further into the body by the drawer track 5.~~

0020. When the center track 6 and the drawer track 5 have reached the position shown in Figure 25, the coupling ~~device [sic: attachment]~~ attachment 16 abuts the front end of the support track 3 or the friction face 19, ~~is~~ and is thus tilted into the perpendicular position ~~and~~ so that it snaps into the hollow 17 of the drawer track 5 (see Fig. 26). The drawer track 5 is thereby coupled with the center track 6 and the two tracks 5, 6 are jointly moved further in the closing direction. Subseqently, as can be seen in Figure 26, the stop 8 of drawer track 5 abuts the rack 9 of the damping device 7, and the push-in motion of the drawer is decelerated.

~~In the further course, the drawer track 5, as can be seen in Figure 26, abuts the ram [sic: traverse] 9 of the damping device 7 and the push-in motion of the drawer is decelerated.~~

0021. After the drawer 1 has ~~again be moved~~ been pushed in further, coupling of the center track 6 with the pull-in attachment ~~5 [sic: 15]~~ 15 occurs, wherein the pull-in attachment 15 engages a coupling part 20 of the center track 6. ~~Now the~~ The center track 6, together with the drawer track 5, is then pulled into the end position shown in Figure 28, wherein this motion is damped by the damping device 7. As a result a highly quiet running-in of the drawer into the furniture body takes place.

0022. When pulling out the drawer 1, first the drawer track 5 remains coupled with the center track 6 and these tracks 5 and 6 are moved together outwardly, until the friction ~~roller [sic: wheel]~~ wheel 13 runs onto the friction face 19 and the differential motion of the tracks 5, 6 results. Instead of the drawer track 5, center track 6 can also abut the damping device 7.

~~Instead of the drawer track 5, center track 6 can also abut the damping device 7.~~

ABSTRACT

A pull-out guide fitting includes a drawer track to be connected to a drawer, a support track to be connected to a body sidewall, and a center track arranged between the drawer track and the support track. A damping device is arranged between at least two of the tracks, and the damping device includes at least two components moveable relative to one another.